UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/620,826	07/21/2000	Reza Majidi-Ahy	164.1017.01	4409

				EXAMINER
22883	7590	08/29/2006		JONES, PRENELL P

SWERNOFSKY LAW GROUP PC
P.O. BOX 390013
MOUNTAIN VIEW, CA 94039-0013

ART UNIT	PAPER NUMBER
2616	

DATE MAILED: 08/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

		Application No.	Applicant(s)
Office Action Summary		09/620,826	MAJIDI-AHY ET AL.
		Examiner	Art Unit
		Prenell P. Jones	2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>7/24/06</u>.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>4-12,14-17,35-44,46-56,60-68,70-83 and 85-95</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) <u>4-12,14-17,35-44,46-49,60-68,70-83 and 85-87</u> is/are allowed.

6)☒ Claim(s) <u>50-56,74-77,88-95</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>5/15/06, 7/24/06</u>.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____ .

Response to Arguments

1.   Applicant's arguments with respect to claims 4-12, 14-17, 35-44, 46-56, 60-68, 70-83

and 85-95 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or
> described as set forth in section 102 of this title, if the differences between the subject
> matter sought to be patented and the prior art are such that the subject matter as a
> whole would have been obvious at the time the invention was made to a person having
> ordinary skill in the art to which said subject matter pertains. Patentability shall not be
> negatived by the manner in which the invention was made.

3.   Claims 50, 52, 53, 74-77, 81 and 89 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Levin et al (US PAT. 6,625,777) in view of Carter (US PAT. 6,477,376).

        Regarding claim 50 and 52, Levin discloses wireless communication optimizing a set of

parameters for a communication channel, said parameters including time-varying parameters

(col. 6, line 59-67, Fig. 7, col. 9, line 22-65 calculation/varying of frequency bins with respect to

optimizing set of parameters), and wherein said steps of optimizing include adjusting said set of

parameters in an integrated manner for optimal performance, said optimal performance being

responsive to interference conditions and/or multi-path conditions (Fig. 1, the functionality of

optimizing set of parameters may be performed by integrated circuitry, optimizing/adjusting set

of parameters in a wireless mobile system in real-time is based on conditions measured

throughout the network as associated with minimizing interference in the system, varying

frequency and time-variable traffic loads are among the conditions measured, update of

parameter sets are based on measured interference levels, col. 5, line 13-67, col. 15, line 29

thru col. 16). However, Levin is silent on uplink and downlink responsive to separate set of

parameters. In a wireless communication system, Carter discloses in a wireless communication

system whereby optimizing the process of designing cell sites is performed in association with

uplink parameters and downlink parameters wherein the uplink and downlink utilize different set

of parameters with respect to controlling the cell site coverage area (Abstract, col. 1, line 45 thru

col. 2, line 67). Therefore, it would have been obvious to one of ordinary skill in the art at the

time of the invention to be motivated to implement associating a different set of parameter in the

uplink and downlink as taught by Carter with the teachings of Levin for the purpose of further

improving configuration in a radio wireless communication system as to provide increased

performance in communication between nodes.

Regarding claim 53, Levin further discloses optimizing a set of line characters/parameters in an

ADSL/ISDN communication system whereby the architecture also includes a video server for

communicating video data via video software installed on the video server (Fig. 1, col. 4, line 27-

35, col. 16, line 37-48).

Regarding claims 74, 75, 77, 88, 89 and 91, Levin discloses wireless communication

equipment processor and associated communication link/channel that executes instructions to

control communication over said communication channel; and memory that stores information

including said instructions, the instructions including the steps of optimizing a set of parameters

(Figs. 2-10, computer software, associated with a control processor for adjusting parameters on

a per channel basis as associated with configuring optimal performance for a set of line/channel

characteristics, whereby the software/computer program is stored in memory (col. 3, line 14-57, col. 4, line 3-26, col. 5, line 13-67 col. 12, line 31-50), optimizing a set of parameters for a communication channel, said parameters including time-varying parameters (col. 6, line 59-67, Fig. 7, col. 9, line 22-65 calculation/varying of frequency bins with respect to optimizing set of parameters), and wherein said steps of optimizing include adjusting said set of parameters in an integrated manner for optimal performance, said optimal performance being responsive to interference conditions and/or multi-path conditions (Fig. 1, the functionality of optimizing set of parameters may be performed by integrated circuitry, optimizing/adjusting set of parameters in a wireless mobile system in real-time is based on conditions measured throughout the network as associated with minimizing interference in the system, varying frequency and time-variable traffic loads are among the conditions measured, update of parameter sets are based on measured interference levels, col. 5, line 13-67, col. 15, line 29 thru col. 16).

Regarding claim 76, Levin further discloses maximizing payload, capacity and gain (Fig. 7 & 8).

Regarding claim 81, Levin further discloses optimizing a set of line characters/parameters in an ADSL/ISDN communication system whereby the architecture also includes a video server for communicating video data via video software installed on the video server (Fig. 1, col. 4, line 27-35, col. 16, line 37-48).

Regarding claim 92, Levin further discloses optimizing a set of line characters/parameters in an ADSL/ISDN communication system whereby the architecture also includes a video server for communicating video data via video software installed on the video server (Fig. 1, col. 4, line 27-35, col. 16, line 37-48).

4.   Claim 51, 54, 56, 90 and 93 rejected under 35 U.S.C. 103(a) as being

unpatentable over Levin et al (US PAT. 6,625,777) in view of Carter (US PAT. 6,477,376). as

applied to claim 50 above, and further in view of Dicker et al (US PAT. 6,975,603).

Regarding claim 51 and 90, as indicated above, Levin and Carter combined discloses an

integrated communication system wherein optimization of a set of line/channel

characters/parameters is utilized for improving communication and whereby the uplink and

downlink are associated with separate sets of parameters. However, Levin and Carter are silent

on spatial separation of communication links. In analogous art, as indicated above, Dicker

discloses a communication system that utilizes optimizing channel parameters to minimize

information loss. Dicker further discloses optimizing set of parameters with respect to

separation of channels, and optimizing channel parameters by using modulation whereby each

frequency maintains spectral spacing/spatial varying as it is associated with interference (col. 3,

line 41-47, col. 4, line 26-67, col. 5, line 63 thru col. 6, line 4.). Therefore, it would have been

obvious to one of ordinary skill in the art at the time of the invention to be motivated to

implement spatial separation of channels as taught by Dicker with the combined teachings of

Levin and Carter for the purpose of further improving system configuration through optimizing

channel characteristics.

Regarding claims 54, 56, 93 and 95, as indicated above, Levin discloses an integrated

communication system wherein optimization of a set of line/channel characters/parameters is

utilized for improving communication. However, Levin is silent on optimal performance

associated with uplink and downlink. As indicated above, Dicker discloses a communication

system that utilizes optimizing channel parameters to minimize information loss. Dicker further

discloses optimizing set of parameters with respect to bandwidth and associated transmit

channel/downlink and receive channel/uplink wherein frame length includes transmit/receive

(uplink/downlink) channels and the frame length is asymmetrically subdivided (Fig. 4, col. 5, line

50-67). Therefore, it would have been obvious to one of ordinary skill in the art at the time of

the invention to be motivated to implement associating the bandwidth with the uplink/downlink

and subdividing frame lengths associated with channels in optimizing channels as taught by

Dicker with the teachings of Levin to further manage and minimize information loss.

5.   Claim 55, 94 are rejected under 35 U.S.C. 103(a) as being unpatentable over Levin et al

(US PAT. 6,625,777) in view of Carter (US PAT. 6,477,376) as applied to claim 50 above,

and further in view of Dicker et al (US PAT. 6,975,603) and further in view of Raghavan et al

(6,128,500).

Regarding claim 55 and 94, as indicated above, Levin, Carter and Dicker discloses optimizing

sets of parameters associated with a set of channels, wherein the uplink and downlink are

associated with different set of parameters. But, Levin, Carter and Dicker are silent on utilizing

a BSC and its association with user equipment. In a cellular communication system that utilizes

optimization/reconfiguring of channel parameters, Raghavan discloses an architecture that

includes an access manager/base station controller configured to control call activity between

receive calls (user equipment mobile) and transmit calls (mobile user equipment) in conjunction

with optimization processing (Fig. 1 & 2, col. 2, line 65 thru col. 3, line 12, line 37-52).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the

invention to be motivated to implement communication between base station controller and user

equipment as taught by Raghavan with the combined teachings of Levin, Carter and Dicker for the purpose of further managing/control communication and minimize information loss in a wireless communication system.

Allowable Subject Matter

1.   Claims 4-12, 14-17, 35-44, 46-49, 60-68, 70-83 and 85-88 are allowed over prior art.

2.   The following is an examiner's statement for indicating reason for allowance: Although the cited prior art teaches a point-to-multi-point communication system that includes groups of codeword associated with OSI physical layer and MAC layer, wherein the sending of first values, and producing second information regarding characteristics of a communication channel in response to a result of the steps of sending and adjusting plurality of first values, they fail to teach or suggest with respect to independent claim 4 and 60 obtaining characteristics of a communication system in response to a first set of values and determining a second set, adjusting includes calculating a newer set of values for link in response to a combination of an older set of values and an adjusted set of values, with respect to 79, optimizing includes selection with regard to optimal performance in response to separate conditions for individual links, with respect to claim 46-48 and 85, time-varying adjustment responsive to a set of QoS application requirements, with respect to claim 86, time-varying adjustment responsive to a set of time-delays or time variations for application service latency, with respect to claim 78, optimizing includes a set of limits for capacity and coverage, with respect to claim 35 and 84, time-varying adjustment is operative to simultaneously adjust multiple ones of plurality of communication parameters, and with respect to claim 96, uplink and downlink are responsive to control using separate sets of plurality of parameters.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prenell P. Jones whose telephone number is 571-272-3180. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Prenell P. Jones
August 3, 2006

CHI PHAM
SUPERVISORY PATENT EXAMINER